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Pesticide Bureau FY '97 Annual Report

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MASSACHUSETTS DEPARTMENT OF FOOD AND AGRICULTURE

Executive Office of Environmental Affairs

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Commissioner

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Introduction

The Pesticide Bureau has continued to manage pesticide risks through a combination of regulatory and educational efforts. 1997 was a year for collaboration, where we worked particularly hard to educate, gather input, and work with stakeholders and other interested parties. Examples of this can be seen in the Pesticide Bureau News, The Massachusetts IPM Council, and the workgroups and meetings held to reform several pesticide regulations.

Regulations

Three efforts to revise two sections of regulation were ongoing during 1997, and should be completed in 1998. Workgroup meetings continued to be held to finalize details of revisions to the Rights of Way (333 CMR 11.00) and the Standards for Application (333 CMR 13.00) regulations. This work was somewhat slowed due to the Department Counsel's position being vacant for a good part of the year. A new Department Counsel is now in place. The revised regulations, that have already been to public hearing, are expected to be brought before the Pesticide Board for approval by the middle of 1998.

The Pesticide Board voted favorably to send a minor revision to the Product Registration Regulations (333 CMR 8.00) out to public hearing. This change would allow retailers to hold pesticides in Massachusetts that have not yet been registered within the Commonwealth. The pesticides would still be prohibited from being sold in Massachusetts until they were registered in the Commonwealth. A public hearing date is tentatively scheduled for January of 1998.

Personnel

Name	Position
Brad Mitchell	Chief
Lee Corte Real	Environmental Chemist
Mark Buffone	Entomologist/Certification & Training Coordinator
Sandra Payne	Certification and Training Assistant
Steve Kenyon	Toxicologist
Gerard Kennedy	Environmental Specialist
Lillian Rivera	Product Registration/WPS Specialist
Susie Reed	Product Registration Assistant
Ursula Szablowski	Clerk
Iliana Rivas	IPM Coordinator/GIS Tech
Poonam Shrestha	Environmental Specialist
Dennis Guastalli	Rights of Way Program Coordinator
John Kenney	Chief Inspector
Andrea Szylvian	Supervisory Inspector
Paul Ricco	Supervisory Inspector
Mike McClean	Senior Inspector
Karen Dixon	Senior Inspector
Arif Bhimani	Intern
Suong Tran	PROTEC Intern

New Publications

Pesticide Bureau News - For the first time ever, the Pesticide Bureau began publishing a newsletter. It is sent to all licensed applicators and persons who receive mailings for the Pesticide Board Meetings.

Information Bulletin: Groundwater Regulations (revised for 1997) - As new Zone IIs are identified, and new pesticides are registered, additional chemicals and locations become subject to the Groundwater Regulations. DFA annually updates the list of Zone II and Potential Groundwater Contaminant list.

A Homeowner's Guide to Environmentally Sound Lawncare - This 20 page guide tells homeowners how to maintain their lawn using fertilizers and pesticides only when necessary. Strong emphasis is put on the need to do soil testing and pest identification. Charts and keys are provided to help the homeowner in weed and insect identification and to help them choose the right kind of seed and fertilizer for their lawn.

What to Know Before You Hire A Pest Control Applicator (revised for 1997) - Homeowners who find themselves in the position of having to hire a pest control contractor often have many questions. For approximately ten years the Bureau has distributed this brochure to try to provide some answers. The revised version has more detailed risk information, and puts a greater emphasis on IPM.

Conferences and Training Sessions Attended

Annual Meeting of the Eastern Branch of the Entomological Society of America. Burlington, VT.

Senior Pesticide Official Refresher Course. EPA. Davis, CA.

Analyzing Risk: Science Assessment, and Management. Harvard School of Public Health. Boston, MA.

National Pesticide Applicator Training and Certification Workshop. EPA. Columbus, OH.

1997 Entomological Society of America Meeting. Nashville, TN.

Measures of Success Using Field Program Indicators. EPA. Davis, CA.

Environmental Indicators Workshop. EPA. Denver, CO.

Council on Licencing, Enforcement and Regulation. CLEAR. Austin, TX.

Annual Meeting of the Northeast Mosquito Control Association. NEMCA. Mystic, CT.

WPS Greenhouse Inspections. EPA. Lincoln, NE.

Producer Establishment Inspections. EPA. Lansing, MI.

Pesticide Compliance Management III. EPA. Davis, CA.

Annual Meeting of the American Mosquito Control Association. AMCA. Salt Lake City, UT.

Pesticide Laboratory Issues. EPA. Davis, CA.

Pesticides and Water Quality. EPA. Davis, CA.

Region I Inspector's Meeting. EPA. Burlington, VT.

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Enforcement

Activities of Enforcement in the administering of the Pesticide License Examinations, and the Right of Way program are covered in a separate section. Data is complied using the 97 federal fiscal year, ending on the 30th of September 1997, regarding activity begun and/or completed during that fiscal year.

During FY '97; thirty eight inspections for Worker Protection Standard (WPS) were conducted:

Greenhouse	6
General Agriculture	16
Nursery	6
Orchard	7
Cranberry	3
Total	**38**

During FY '97 three of the routine inspections for WPS compliance resulted in Letters of Warning. These concerned: lack of adequate WPS training of workers, application information not appropriately displayed, missing safety posters, missing change of clothing in decontamination area.

As in past years, Enforcement continues to lecture to the pesticide using community regarding laws and regulations. These lectures have been sponsored by Co-operative Extension, various industry associations and companies.

During FY '97 an additional Senior Inspector was added which brings the staff strength up to 6 Inspectors. During most of FY '97 one Senior Inspector was unable to work, and was on limited duty upon return.

All Inspectors attended the annual training week conducted for all New England pesticide program Inspectors, sponsored by EPA Region I.

In addition to the many phone calls received about pesticide enforcement questions, Enforcement responded to 95 calls regarding various pesticide related concerns, that were handled at a lesser level of activity than a complete investigation.

The Enforcement section continues to conduct routine inspections of pesticide user establishments, producer establishments and investigate complaints. Inspections have been conducted at:

Agricultural Follow up	8
Agricultural Use Observations	23
Non Agricultural Follow up	65
Non Agricultural Use Observations	69
Certified Applicator Records	99
Marketplace Inspections	231
Producing Establishment Inspections	23
Restricted Use Pesticide Dealer Inspections	21
Total:	**539**
Samples To MPAL	158
Doc Samples	49
Notice Of Aerial Applications Of Pesticides	10
Permits For Aerial Application Of Pesticides	3

Enforcement conducted 65 inspections of retail outlets selling general use pesticides that may have damaged containers. In the past we have found many of the stores inspected large volume and warehouse operations, to be in violation of the damaged containers regulations. These particular inspections were conducted during the first week of June 1997 in conjunction with all 6 New England States and New York State. The result of these combined inspections indicated a major improvement in compliance throughout the region, with only a few minor problems found.

During spring 97, Inspectors conducted inspections for unlicensed activity of landscapers and others relative to lawn care activity. These inspections were conducted in 29 towns throughout the Commonwealth.

The findings were:

Companies claiming no use of pesticides:	29
Companies admitting occasional use in past:	21
Companies with licensed applicators:	7
Companies Using / Enf Action	1 (LOW)

Also during the spring of 1997 a campaign was initiated to educate and warn the public of illegal pesticide use by unlicensed individuals. The goal of this campaign is to stop this illegal activity. With the assistance of the Department's Media Communications Coordinator, a campaign was geared to newspapers in Massachusetts. Visits were made to many newspapers requesting their help in circulation. Eighteen media sources supported this effort. The campaign is an ongoing process and will continue in the Spring in 1998.

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Enforcement Actions

The Department has concluded an enforcement action with an agreement with a national lawn care company regarding unauthorized taking of a pesticide applicator's examination material for the use of others in preparing for the applicator's test. In that agreement, the company agreed, among other issues, to:

a. The twelve employees who took the exam on March 7, 1997 will be required to take another examination in order to be issued a Massachusetts pesticide applicator's license.

b. No work of any kind by the involved office will be permitted in Massachusetts for a period of 1 year beginning from the date the parties execute this letter.

c. The licenses of the Field Manager and the Branch Manager will be surrendered to the Department for 2 years by each. At the conclusion of the two years each will be required to take the appropriate examination if they wish to be relicensed.

d. The company will provide a pesticide training class for applicators, open to any licensed /certified applicators who wish to participate, including those not employed by the company. The class will be designed to accommodate a minimum of 150 attendees. The details of the training shall be coordinated with the Pesticide Bureau and the University of Massachusetts cooperative Extension System, the agency which conducts pesticide applicator training.

e. Applicators in the company branches which will be taking over the accounts in Massachusetts previously serviced by the offending branch will be required to attend additional training sessions within one year to obtain 3 contact hours each for both licensed and certified applicator in addition to the standard 6 contact hours for licensed applicators and 12 for certified applicators.

An investigation was conducted at the request of the EPA concerning misbranding and unregistered pesticide issues regarding claims of germicidal action made by a company which distributed food preparation / cutting boards. This resulted in the EPA levying a proposed fine of approximately $84,000 and requiring the company to change the claims made.

Warnings	72
Administrative Orders	5

Issues addressed in Administrative Orders and Warnings Issued During Inspections

Administrative Orders*		Warnings Issued During Inspections	
Use inconsistent w/label	1	Agriculture Follow up	4
Sale & Use of unregistered pesticide	2	Non Agricultural Use Observations	1
Unreasonable adverse effect	3	Non Agriculture Follow up	27
Failure to provide info & post	2	Marketplace Inspections	14
		Pesticide Applicator Record Inspections	25
		Restricted Use Pesticide Dealer Inspections	1

* Note that some orders address only one issue while some others address more than one.

Enforcement Codes for Tables 1, 2, 3, 4, 5 and 6

Graph Codes	Description	Graph Codes	Description
AG	Agriculture - general	LC	Lawn Care
AGU	Agricultural Use	MAI	Maintenance
AGF	Agricultural Follow Up	MKT	Marketplace
CAR	Certified Applicator Record	MOS	Mosquito
CRB	Cranberry	MPT	Import
CUS	Custom Agriculture	MSC	Miscellaneous
DAI	Dairy	NAF	No Agricultural Follow Up
DIS	Distributor	NAU	Non Agricultural Use
EUP	Experimental Use	NUR	Nursery
EXP	Export	ORC	Orchard
FOR	Forestry	PEI	Producing Establishment
GOL	Golf Club	PH	Public Health
GPC	General Pest Control	PRDI	Producer/Distributor
GRH	Green House	REM	Real Estate Management
HO	Home Owner	ROW	Rights of Way
LL	Landlord	RUP	Restricted Use Pesticide Dealer
LSC	Landscape	STO	Shade Tree & Ornamental
VER	Vertebrate	TER	Termite

Table One: Total Inspections Done in FY '97 By Category

COOPERATIVE AGREEMENT QUARTERLY REPORT

QUARTER: 0

FEDERAL FISCAL YEAR: 97

	AGU	AGF	NAU	NAF	EUP	PEI	MKT	MPT	EXP	CAR	RUP	TOTALS
TOTAL INSPECTIONS	23	8	69	65	0	23	231	0	0	99	21	539
Federal Facilities	0	0	0	0	0	0	0	0	0	0	0	0
HOW MANY ADDRESSED THE FOLLOWING:												
a): Worker Protect.	7	2	0	0	0	0	4	0	0	25	0	38
b): Ground Water	0	0	0	0	0	0	0	0	0	0	0	0
c): Endangered Spec.	0	0	0	0	0	0	0	0	0	0	0	0
d): Cancel/Suspended	0	0	0	0	0	0	0	0	0	0	0	0
SAMPLES COLLECTED												
Physical Samples	15	12	35	38	0	55	0	0	0	3	0	158
Documentary Samples	0	2	3	17	0	10	10	0	0	7	0	49

INSPECTION REPORT

DATE PRINTED:
05-Oct-97

Table Two: Enforcement Actions Issued in FY '97 by Category

COOPERATIVE AGREEMENT QUARTERLY REPORT

QUARTER: 0

FEDERAL FISCAL YEAR: 97

	AGU	AGF	NAU	NAF	EUP	PEI	MKT	MPT	EXP	CAR	RUP	TOTALS
CIVIL COMP. ISSUED	0	0	0	0	0	0	0	0	0	0	0	0
CRIM. ACTS REFERRED	0	0	0	0	0	0	0	0	0	0	0	0
ADMIN HEARINGS	0	0	0	0	0	0	0	0	0	0	0	0
LIC/CERT SUSPENSION	0	0	0	0	0	0	0	0	0	0	0	0
LIC/CERT REVOKATION	0	0	0	0	0	0	0	0	0	0	0	0
LIC/CERT MODIFY	0	0	0	0	0	0	0	0	0	0	0	0
NUMBER of WARNINGS	0	4	1	27	0	0	14	0	0	25	1	72
SSURO'S/EMBARGOES	0	0	0	0	0	0	0	0	0	0	0	0
CASES FORWARDED EPA	0	0	0	0	0	0	0	0	0	0	0	0
OTHER ENF. ACTION	0	1	0	2	0	0	2	0	0	0	0	5
CASES ASSESSED FINE	0	0	0	0	0	0	0	0	0	0	0	0

ENFORCEMENT REPORT

DATE PRINTED:
05-Oct-97

Table Three Graph of FY '97 Inspections

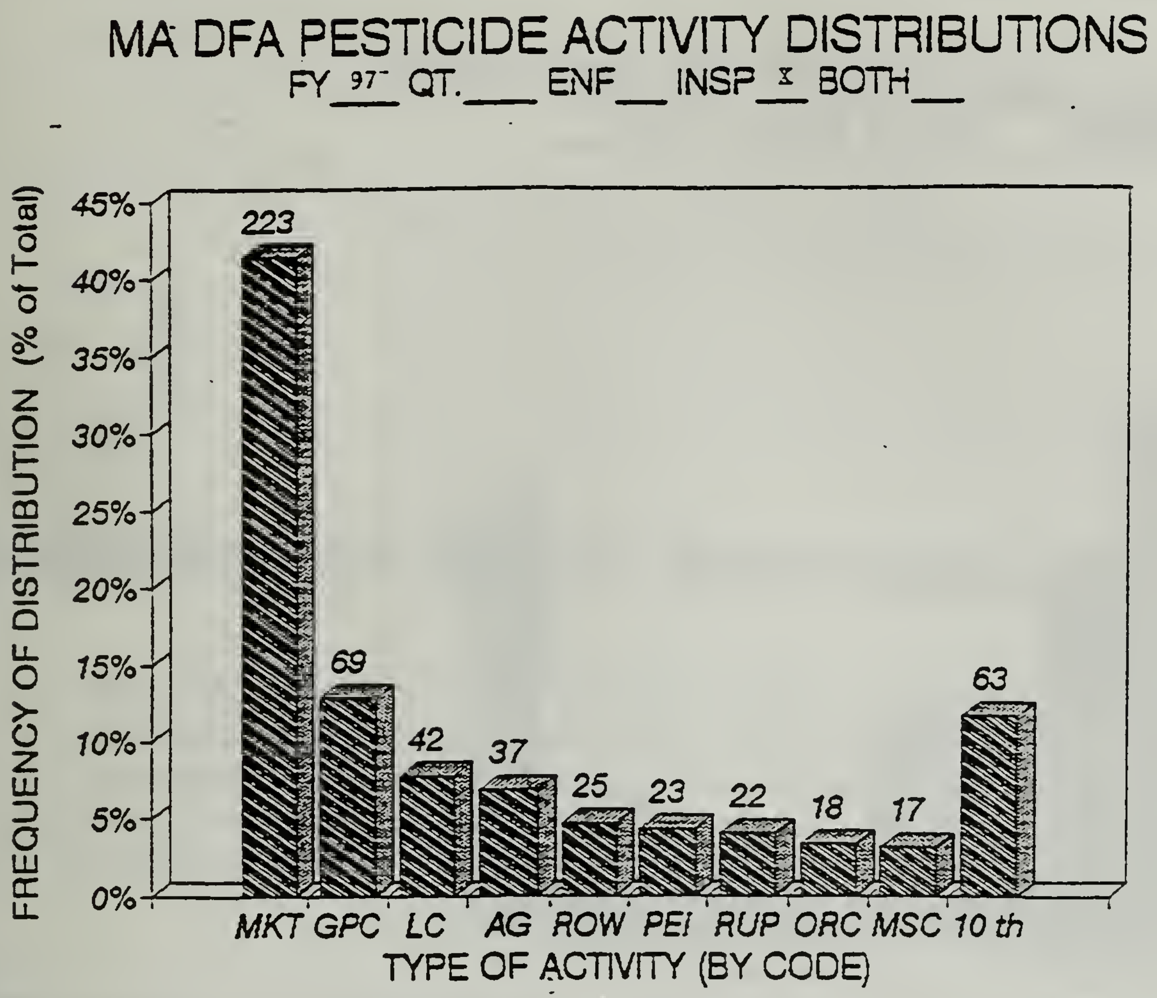


Table Four: Graph of FY '97 Inspections Combined with Enforcement Actions

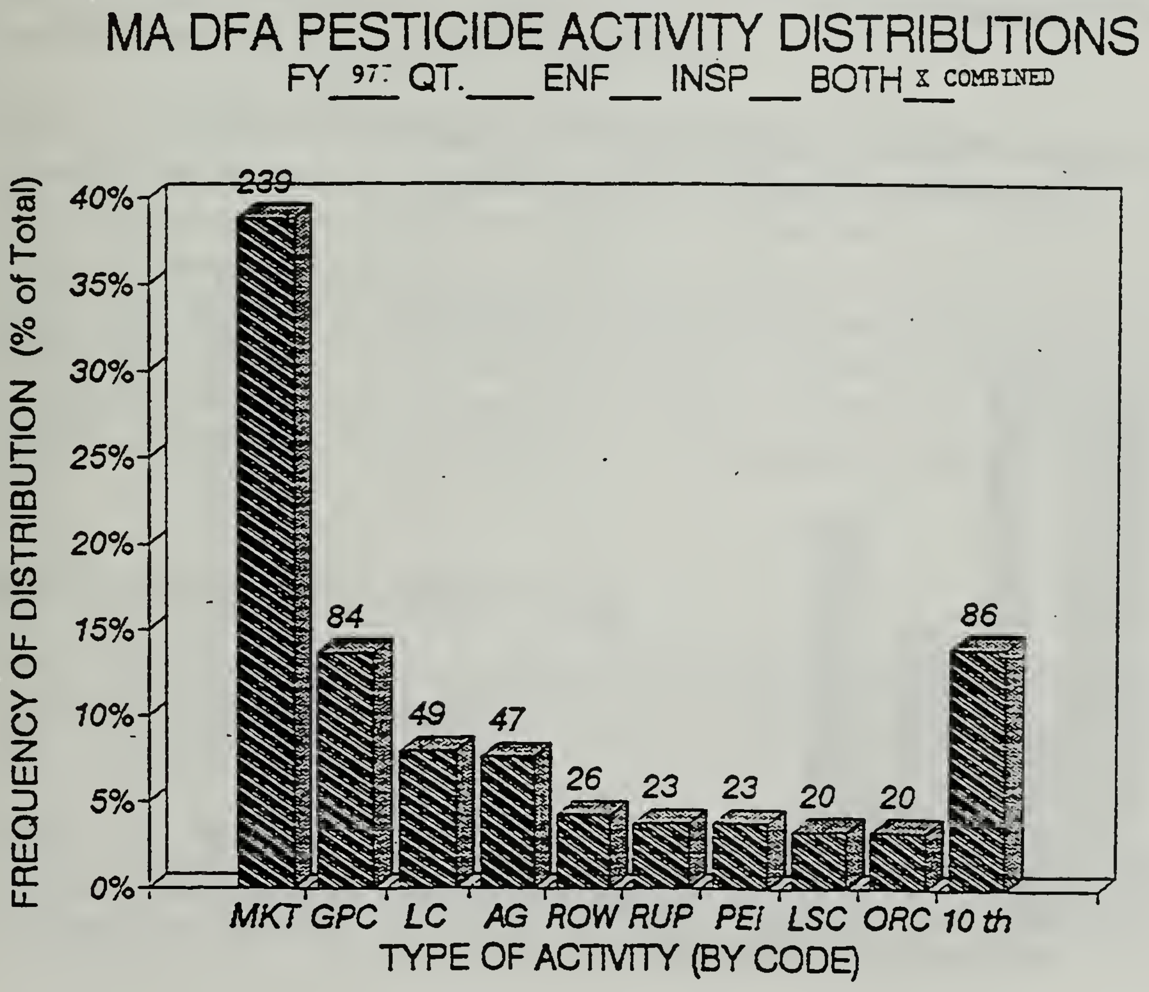


Table Five: Graph of FY '97 Enforcement Actions

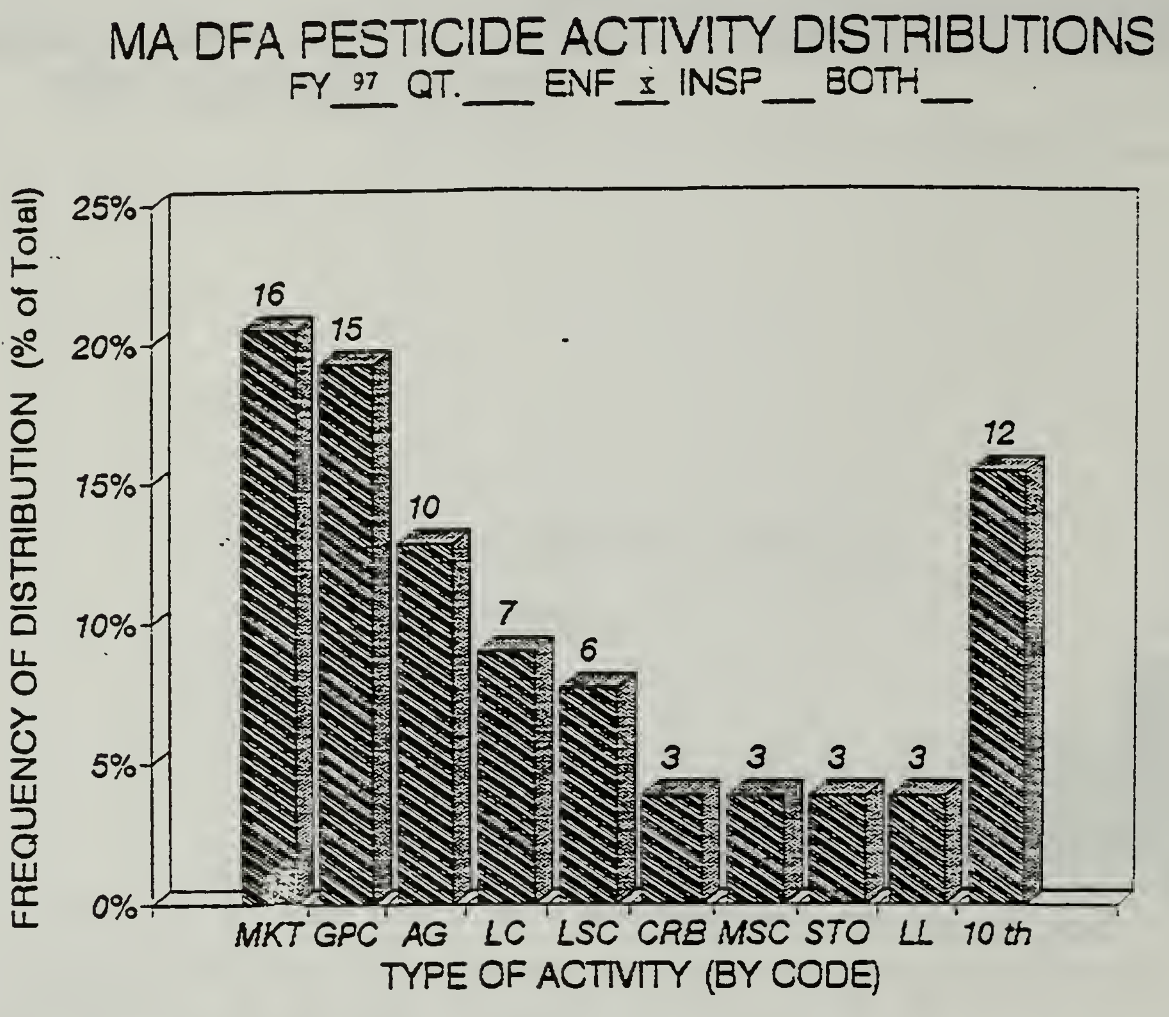
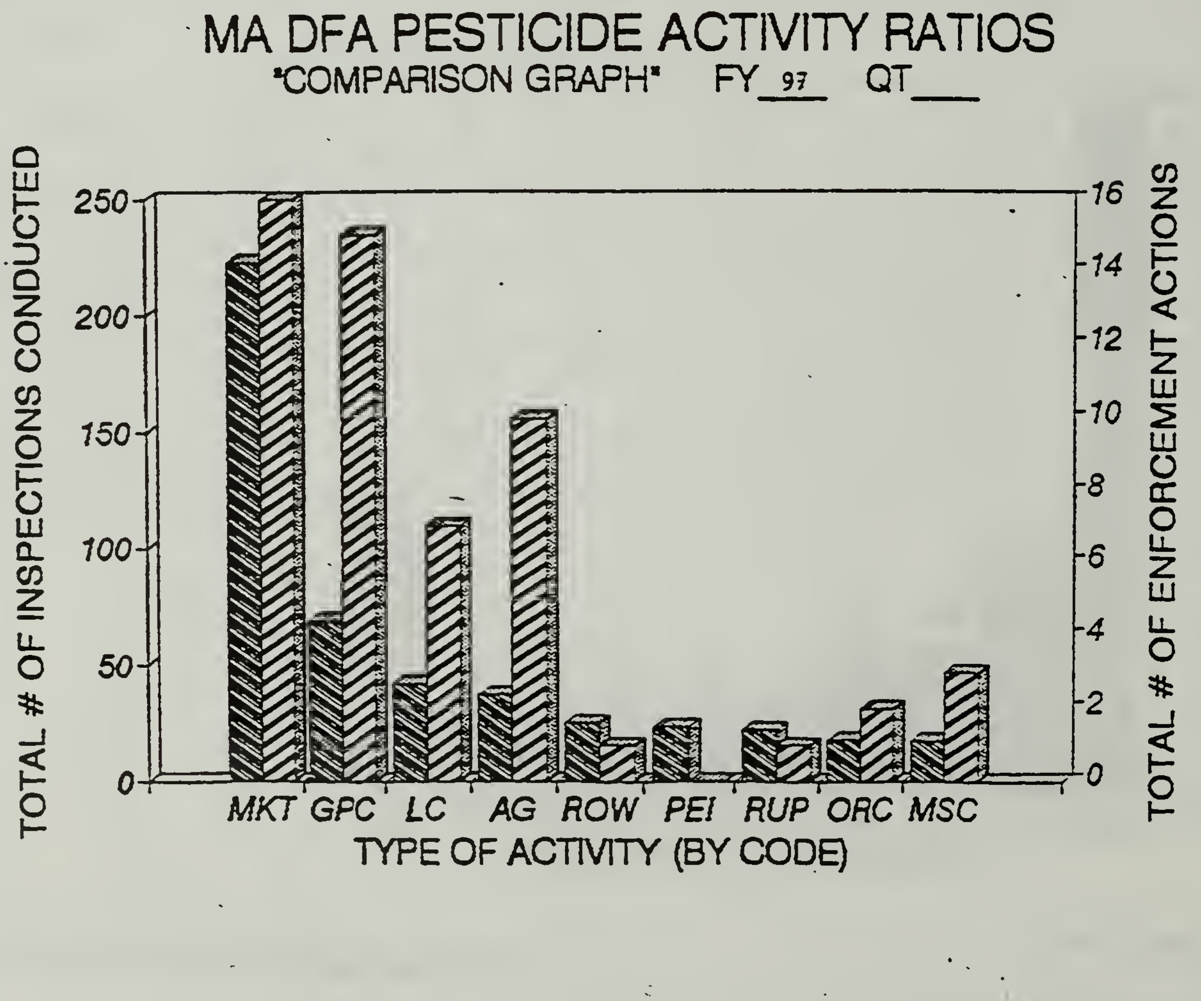


Table Six: Graph of FY '97 Inspections Compared to Enforcement Actions



3

Rights of Way Management

New ROW regulations were drafted in 1997. Streamlining, defining specific criteria, and interpretation were the focus of these proposed changes. Public hearings were initiated and comments taken into consideration. A second writing should be completed in 1998. These proposed ROW regulations will be brought before the Pesticide Board sometime in 1998 for comment, review and approval.

Program Outreach

In 1997 the ROW Program began to improve the foundations and practices of the Municipal Roadway program. It became clear that many towns and municipalities were under the impression that use of herbicides did not warrant any action on their part. This improvement process consisted of a three stages. Three months of development and field work were required for this effort.

Step one consisted of a mailing to all licensed dealers informing them of the specific materials towns and municipalities may purchase for use along their roadways. Step two included another mailing sent to all 351 cities/towns, detailing the ROW regulations and compliance requirements. Step three was a visit to an additional forty two towns. These forty two towns indicated by phone and/or mail that they had used or were using herbicides illegally or desired to comply with or merely discuss their practices. This program expansion was responsible for increasing the effectiveness of the Municipal Roadway program. These improvements will continue throughout 1998.

Compliance Monitoring

Six use observations were conducted by the Rights-of-Way program. All six use observations were conducted on Rights-of-Ways bordering sensitive areas of utility, highway, and major railroad lines.

Thirty three individual inspections were made to Conrail, Amtrak and New England Central, Boston and Maine, and Providence and Worcester Railroads. Twenty highway ID marking Inspections were made to individual roadways. These individual checks determined accurate guardrail markings, delineation checks and specific enforcement re-checks after initial applications.

Approximately sixty seven individual visitations were by the Rights-of-Way Investigator. These visitations were made to cities/towns throughout the Commonwealth to educate Conservation Commissions, selectmen, mayor offices, and Boards of Health as to the vegetation management plans (VMPs) and yearly operational procedures (YOPs) for maintaining municipal roadways. Technical assistance was offered throughout these individual visitations to ensure that the municipalities were complete in their responsibilities of delineation and compliance.

Sensitive Areas

In August and September of 1997, the ROW Program mailed a press release request for private well identification to all major media outlets. The Department gathered information from approximately thirteen municipalities and/or individuals regarding the identification of private wells under sensitive area protection. Over twenty two additional well locations were gathered, most along municipal roadways. Many of the sites reported did not meet the criteria under the Regulations or were not adjacent to town/municipality roadsides or under any Rights-of-Way in question.

Yearly Operational Plans (YOPs)

Thirteen YOPs were submitted to the Bureau for approval in 1997. These YOPs covered Rights-of-Way activities in over 286 towns and municipalities in the Commonwealth. The thirteen YOPs included The Massachusetts Turnpike Authority, three new towns that will be in management along the new stretch of the Greenbush Line in the South Shore, a new railroad for 1998 within the Old Quincy Shipyard, along with the additional towns/municipalities that were not covered by the Massachusetts Highway Department's 1996 YOP.

Pesticide Applicator Certification and Training Program

The Massachusetts Department of Food and Agriculture is the state lead agency for pesticide regulation in the Commonwealth. The Pesticide Bureau's licensure program has a critical position in the Department carrying out both state and federal mandates pertaining to pesticide applicator licensure in the Commonwealth. These mandates titled the Massachusetts Pesticide Control Act (MPCA) and the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) set the standards for those individuals who want to use pesticides. Pesticides can effect human health, wildlife, and the environment. As a result, individuals using pesticides need to demonstrate their knowledge about the safe and proper use of these materials. The Certification and Licensing program fulfills the intent of these mandates by administering state examinations, issuing certifications and licenses, assuring continued competence, and approving and coordinating training. In the main, the overall program purpose is to protect the general public, the environment, and the person using pesticides.

Certification and License Types

There are four (4) types of pesticide licenses in Massachusetts.

These are:

1. Commercial Applicator License
2. Dealer License
3. Commercial Certification License
4. Private Certification License

These different types of certification and license documents permit individuals to legally use pesticides including, but not limited to, purchasing, selling, applying, mixing, loading, storing, disposing, and transporting.

Certified and licensed applicators have a special responsibility to handle all pesticides safely. As a result, these individuals must demonstrate their pesticide knowledge competency through passing a state pesticide examination.

Certification and Licensing Examinations

During any fiscal year, a number of state examinations are offered to those seeking pesticide licensure. There was a small increase in the number of state pesticide examinations offered during FY '97. Twenty-five (25) state examinations were offered to individuals seeking pesticide licensure during FY '97 compared to the twenty-three (23) offered in FY '96. The exam frequency by calendar year comparing 1996 to 1997 was slightly different. There was a total of twenty-five (25) exams during calendar year 1996 compared to twenty-four (24) exams for calendar year 1997. These minor differences reflect the scheduling of more exam dates during the spring and early summer that fall within the fiscal year reporting period.

As important as it is to offer an adequate number of opportunities to take the state pesticide examination, we prioritize the scheduling so that they meet peak periods of applicator and company needs during the months of March, April, and May of each fiscal year. Finally, the exam schedule is set up to provide an exam opportunity at least once a month.

The certification and licensing program works continually with individuals seeking pesticide licensure through the examination process. During FY '97 a total of one thousand nine hundred and twenty-two **(1,922)** persons **registered** to take pesticide licensure exams. The **actual** number of individuals who were present to take the state pesticide examinations was one thousand six hundred and forty-two **(1,642)** during FY '97.

Statistics for 1997 show a marked escalation in the number of examination applicants in

1997. The analysis shows that for a three month period ending in June of 1997, there was an approximate 23 % increase in examination applicants compared to the number of exam applicants in 1996. The same number of exams were given during this three month period for both 1996 and 1997.

The number of people taking state exams **by license type** are shown for FY '95, FY '96 and FY '97 for comparison purposes below:

Actual Exam Statistics By License Type

EXAM TYPE	FY '97	FY '96	FY '95
Commercial Certification Exam	186	161	181
Dealer License Exam	13	13	17
Commercial Applicator License Exam	1,333	1,133	1,163
Private Certification Exam	110	94	81
Total	**1,642**	**1,401**	**1,442**

It is interesting to note that the number of individuals taking exams increased slightly for FY '97. This increase represents approximately a fifteen (15%) percent increase over FY '96.

Certification and License Documents

The process to obtain a pesticide certification or license involves a registration and study experience.

During FY '97, we continued to mail out several thousand pesticide exam and license information bulletins to individuals and pest control companies. The fourteen (14) page bulletin provide interested individuals guidance on how to obtain a pesticide certification or license including such items as an exam application, exam schedule, study guide order form, applicator license training course information, resume form to verify experience, and other useful information. The program is far more efficient in its response to exam and license information requests by mailing the bulletin out the next day.

Those individuals seeking a pesticide certification or license need to learn and acquire knowledge concerning pesticide concepts, principles, practices, regulations, and terminology. The study experience is a self-directed learning experience. Individuals purchase required study materials from the University of Massachusetts. Individuals are required to study the following materials.

General Applicator Manual
General Applicator Manual Supplement

Massachusetts Pesticide law and regulations
Specific Certification Manual

The self-directed study experience provides a flexible format whereby the individual can learn and gain primary pesticide knowledge at their own pace. However, there is classroom training (voluntary) covering the General Applicator Manual and Supplement made available through the University of Massachusetts Cooperative Extension Service.

Number of Certification and License Documents Issued

CERTIFICATION/LICENSE TYPE ISSUED	FY '97	FY '96	FY '95
Commercial Certification	2,385	2,494	2,650
Dealer License	142	143	142
Commercial Applicator License	2,593	2,382	2,152
Private Certification	1,591	1,588	1,621
Total	**6,711**	**6,607**	**6,565**

NOTE: Each Fiscal Year we continue to observe a small increase in the Commercial Applicator Licenses due to the new licensing standards that became effective January 1, 1994. (See standards below) These numbers affect the overall total by indicating an increase of about 1.5%. The current numbers tell us that individuals are maintaining their pesticide credentials. In some years, we see decreases in the numbers of licenses issued due to factors such as individuals retiring, changing their profession, having their records purged due to not maintaining continuing education requirements, seasonal employment layoffs, and moving to another state.

Renewal Applications

Once individuals demonstrate that they have acquired the necessary knowledge to handle pesticides in a safe manner, they are sent an application to obtain the pesticide license. Once an individual becomes licensed, the document must be renewed on an annual basis pursuant to state pesticide law and regulations. All certification and licenses with the exception of Dealer Licenses expire on December 31st of each year. The Dealer License expires on the last day of February of each year. As a result, individuals eligible to renew for the next year automatically receive a renewal application. These renewal applications are mailed out in October and each applicator must renew their certification and/or license by January 1st. Otherwise, they are required to retake and pass state examination(s) to be eligible for a certification or license during the new year.

Note: As implemented during FY '96, another effort was made during FY '97 to enforce the January 1st deadline. The majority of individuals eligible to renew their pesticide credential did so by January 1st. This effort ensured that all eligible licensees had a new 1997 pesticide license in time for the new year. As a result, both the professional, industry, and the public benefit, knowing that they have a current and valid license as of January 1st or shortly thereafter.

Total Renewal Applications Mailed

	FY'97	FY'96	FY '95
Total Renewal Applications Mailed	6,786	6,531	6,053
Total Returned and Approved	5,934	5,943	5,531
Percent Compliance (%)	87%	91%	91%

Number of Persons Who Renewed Certification and License

Credential Type	FY'97	FY '96	FY '95
Commercial Certification	2,296	2,427	2,497
Dealer License	145	137	126
Commercial Applicator License	1,987	1,840	1,349
Private Certification	1,506	1,539	1,559
Total	**5,934**	**5,943**	**5,531**

Overall, the percent compliance decreased slightly from prior fiscal years. This was due to a number of commercial core licensed applicators (534 out of 2,521) not renewing their calendar year 1997 renewal. This could indicate the fact that a number of those individuals holding a commercial core applicator license are seasonal employees and do not return . In additional, a number of licensees were require to retake state exams because they did not maintain continuing education contact hours. The raw numbers show that other license types did much better such as the Private Certification (grower) license type. Of the 1,595 renewals mailed, 1,506 were mailed back and approved. This represent a high compliance rate of 94%. Of the Commercial Certification license type, 2,296 renewal applications were returned and approved out of 2, 525 mailed out that reflects another good compliance rate of 91%. Finally, all of those individuals who sell restricted use pesticides returned their 1997 Dealer License renewal for a compliance rate of 100%.

FY' 97 Number of Audits by Credential Type

Type	Number	# of educational hours required
Commercial Certification	201	12
Private Certification	138	12
Commercial Applicator License	97	6
Dealer License	10	3

Those applicators who did not meet the required number of educational hours were obligated to retake the state examination to be recertified or relicensed during FY '97. Generally speaking, the majority of the individuals who were audited met the continuing education requirement.

Continuing Education

Every three (3) years, license holders must attend retraining/continuing education programs and obtain contact hours to maintain and enhance their pesticide applicator knowledge.

During FY' 97 an audit of pesticide users took place. A ten percent (10%) random audit was conducted. A total of 446 applicators were audited to verify they had met the required number of contact hours by the end of a three year training period. The audit was a random audit flagging about 10% of the applicator data base.

4

U.S. EPA Worker Protection Standard (WPS)

EPA Proposed Changes to the Worker Protection Standard (WPS)

Under the Federal Insecticide, Fungicide, Rodenticide Act (FIFRA), EPA establishes standards for protecting applicators and farm workers from pesticide exposure. The WPS defines and sets minimal standards for the types of personal protective equipment (PPE) for use when handling pesticides. These standards must be displayed on the pesticide labels. Under the WPS, chemical resistant gloves are required in several circumstances, such as mixing, loading and applying pesticides, and when workers re-enter pesticide treated areas during the restricted-entry interval(REI). The WPS generally prohibits glove liners made of absorbent material from being used under chemical resistant gloves.

In 1995, EPA received several requests from growers to allow workers to wear separable glove liners beneath their chemical resistant gloves when entering exiting aircraft used to apply pesticides.

For the purposes of EPA's proposal, a glove liner is defined as a separate glove-like hand covering made from a light weight material, with or without fingers. Flocking, that consists of closely placed small tufts of soft material glued or bonded onto the insides of gloves, is not defined as a glove liner. Flocked gloves are prohibited by the WPS because they are nearly impossible to adequately decontaminate, and EPA believes that they are unlikely to be disposed of after they are used.

Summary of Proposal

All agricultural workers (harvesters, cultivators, pesticide handlers) are permitted to wear separable glove liners beneath chemical resistant gloves.

Workers may choose when to wear the liners.

The liners may not be longer than the chemical resistant glove so that they do not extend outside of the glove.

The liners must be disposed of after 8 hours of use, or at the end of the work day, whichever comes first.

Agricultural pilots do not have to wear chemical resistant gloves when entering or exiting aircraft.

Pesticide Product Registration

The Massachusetts Process

Any person who has obtained a product registration from the EPA must then apply for a registration with the Department of Food and Agriculture. The registrant or an agent acting on behalf of the registrant, is required to submit an "Application for New Pesticide Registration", a Material Safety Data Sheet (MSDS), a product label. A fee of $100.00 dollars is also required for each different EPA registration number.

New products are registered generally on a monthly basis. Every product label is thoroughly reviewed for compliance with state and federal laws and then brought to the Pesticide Board Subcommittee for consideration. A registration is valid from a period beginning with the initial date of approval by the Subcommittee and ending on the next June 30th. Each registration must be renewed annually no later than July 1, and the cost is $100.00 per different EPA number. Currently there are 9,989 pesticide products registered in the Commonwealth.

Revisions to 333 CMR 8.00 Pesticide Product Registration

Many of the regulations in the Commonwealth had to be revised in accordance with guidelines provided by the office of Administration and Finance. The intent of the changes to the pesticide product regulations were simply to streamline regulations - make them easier to read as well as remove any unnecessary sections.

Highlights of changes made to the pesticide product regulations are as follows:

Definitions were removed.

Most of the criteria for denial or restriction of products were removed.

The time between when an application is received and a product registered has been changed from 60 days to “within a reasonable and practicable amount of time from when a completed application is received”.

The process for reviewing new active ingredients (a.i.) has been streamlined where an EPA Fact Sheet or the equivalent may be presented to the Subcommittee. The Subcommittee may request a full review if there are issues of toxicity or environmental fate that need further study than the fact sheet will allow.

Special Local Needs (SLN) Registrations

When a particular agricultural problem exists that can only be mitigated through the use of a pesticide that is not federally registered for that specific purpose, that pesticide's use may be regulated by the Commonwealth under section 24© of FIFRA. Currently, there are 13 active SLNs.

MASSACHUSETTS ACTIVE SLN REGISTRATIONS

HACO (HOPKINS AG CHEMICAL CO.)
RAMIK BROWN
(DIPHACINONE) FOR USE IN ORCHARDS AGAINST RODENTS
EPA REG. NO. 876-184
MA SLN NO. 77-0001

RHONE POULENC
WEEDAR 64
(DIMETHYLAMINE-2,4-D) FOR USE ON CRANBERRIES AGAINST WEEDS
EPA REG. NO. 264-2
MA SLN NO. 79-0001

RHONE POULENC
LARVIN BRAND 3.2 THIOCARB INSECTICIDE/OVICIDE
THIOCARB FOR USE ON SWEET CORN AGAINST ARMYWORMS, CORN EARWORM AND EUROPEAN CORN BORER
EPA A SLN NO. 89-0001

ISK BIOTECH CORP.
BRAVO 720
(CHLOROTHALONIL) FOR USE ON CRANBERRIES AGAINST UPRIGHT AND RUNNER DIEBACK
EPA REG. NO. 50534-188
MA SLN NO. 90-0001

COMPLIANCE SERVICES INTERNATIONAL
CARBAMATE WDG FOR USE ON CRANBERRIES AGAINST FAIRY RING DISEASE
EPA REG. NO. 45728-7
MA SLN NO. 93-0002

ABBOTT LABORATORIES
DIPEL ES BIOLOGICAL
INSECTICIDE EMULSIFIABLE SUSPENSION FOR USE ON CRANBERRIES AGAINST GYPSY MOTH, CUTWORMS, CRANBERRY BLOSSOM WORM, FALSE

ARMY WORM AND SPANWORMS
EPA REG. NO. 275-65
MA SLN NO. 95-0001

PLATTE CHEMICAL CO.
CURBIT EC HERBICIDE
ETHALFLURALIN FOR WEED CONTROL IN PUMPKINS, SUMMER SQUASH AND WINTER SQUASH
EPA REG. NO. 34704-610
MA SLN NO. 95-0002

CIBA-GEIGY CORP.
DUAL 8E
METOLACHLOR FOR WEED CONTROL IN TRANSPLANTED CABBAGE AND TRANSPLANTED BELL PEPPERS
EPA REG. NO. 100-597
MA SLN NO. 95-0004

ISK BIOSCIENCES
BRAVO ULTREX
CHLOROTHALONIL TO CONTROL UPRIGHT AND RUNNER DIEBACK DISEASE ON CRANBERRIES
EPA REG. NO. 50534-201
MA SLN NO. 96-0001

VALENT USA CORPORATION
ORTHENE 75 S SOLUBLE POWDER
ACEPHATE AT A REDUCED PHI TO CONTROL SECOND GENERATION SPARGANOTHIS FRUITWORM ON CRANBERRIES
EPA REG. NO. 59639-26
MA SLN NO. 96-0002

VALENT USA CORPORATION
ORTHENE 75 WSP
ACEPHATE AT A REDUCED PHI TO CONTROL SECOND GENERATION SPARGANOTHIS FRUITWORM ON CRANBERRIES
EPA REG. NO. 59639-89
MA SLN NO. 96-0003

Experimental Use Permits (EUP)

State experimental use permits are required to control potential hazards of pesticide experimentation under out-of-door, greenhouse, and domestic animal trial conditions. To obtain such a permit, a state application must be filed with the Pesticide Board Subcommittee along with a product label, a copy of the EPA EUP and a fee of $100.00 dollars. The following EUP was granted this year.

Novartis Crop Protection
Medallion Fungicide a.i. fludioxonil tested as a protectant fungicide for the control of a variety of diseases on turf grass.
EPA EUP No. 100-EUP-100
MA EUP No. 97-0001

Pesticide Board Subcommittee Actions

State Individual Reviews

An individual review is a reevaluation of an existing registration i.e. change of use classification, suspension or other limitation. In addition, a review is warranted for every product containing a new active ingredient (a.i.) never before registered in the Commonwealth. What follows is an outline of the new a.i. state individual reviews that were conducted by staff from the Department of Food and Agriculture and what action was taken by the Pesticide Board Subcommittee:

Registrant	Product Name/Active Ingredient	Use	Registration Status
Pfizer Animal Health	Mycodex Environmental Control Aerosol Room Fogger EPA Reg. No. a.i. nylar	This a.i. is an insect growth regulator with a juvenile hormone-like material chemically synthesized and has been proven to act as the naturally occurring juvenile hormone does in the growth of insects.	Registered on July 17, 1996
Waterbury Company	Country Vet Flea Fogger EPA Reg. No. 9444-168 a.i. Prallethrin (ETOC)	Used to control various household insects such as roaches.	Registered on July 17, 1996
LiphaTech, Inc.	Rhone Merieux, Inc. Frontline SprayTreatment , EPA Reg No. 65331-1 a.i. fipronil	Labelled for use on domestic pets against fleas and ticks.	Registered on August 21, 1996

E.I. Du Pont de Nemours & Co.	Basis Herbicide EPA Reg. No. 1352-571 a.i. rimsulfuron	Basis provides selective poste emergence grass control in field corn applied at spike through 4-leaf (2 collar) corn stage.	Registered on August 21, 1996
Abbott Laboratories	DiTera ES, EPA Reg No. 275-110 a.i. Myrothecium verrucaria	Used to suppress populations of plant pathogenic nematodes parasitizing food, fiber, and ornamental crops.	Registered on December 18, 1996
Zeneca	Heritage Fungicide EPA Reg. No. 10182-408 a.i. azoxystrobin	Processed by EPA as a reduced risk pesticide. Used to control certain diseases on turf.	Registered on March 26, 1977
Novartis	Medallion Fungicide EPA Reg. No. 100-769 a.i.fludioxonil	Used in the control of certain foliar and soilborne diseases in ornamentals grown in containers, greenhouses and other enclosed structures.	Registered on April 16, 1997

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Integrated Pest Management Program

Integrated Pest Management, or IPM, is an ecologically-based approach at pest control that links together several related components, including monitoring and scouting, biological controls, mechanical and/or other cultural practices, and pesticide applications. By combining a number of these different methods and practices, satisfactory pest control can be achieved with less impact on the environment than calendar based pesticide applications. An IPM strategy is applicable to both agricultural and urban settings. The Department's IPM initiatives may be described under these two separate categories. It should be emphasized that this IPM Program is part of a coordinated, Department-wide effort.

Agricultural IPM

IPM Certification

Partners with Nature is a voluntary, collaborative effort of the Department of Food and Agriculture (DFA), the UMass Extension, and the USDA's Farm Service Agency which recognizes growers who practice IPM. This program certifies the practice by that certain crops are grown. Growers who follow specific IPM guidelines, and complete a verification process become IPM-certified. Participants are licensed to display the *Partners with Nature* trademark, and receive educational and marketing materials for public distribution and display. For the 1997 growing seasons, IPM standards were made available for eight crops, including strawberries, sweet corn, tomatoes, peppers, cole crops (e.g., cabbage, cauliflower), potatoes, pumpkins and winter squash. During the 1997 season, a total of forty four growers enrolled in the Program; forty growers met the standards and became certified in their selected crops.

In the 1997 season Shaw's Supermarkets and Bread & Circus agreed to recognize produce grown by *Partners with Nature* participating farmers. In early September of '97, the DFA coordinated a press event at a Shaw's supermarket in East Boston promoting IPM and *Partners with Nature* growers specifically; Ken Araujo, owner of Araujo Farms in Dighton, was recognized for his IPM sweet corn. Representatives from UMass Extension, USDA Farm Service Agency, MDFA, and Shaw's contributed to the event that was covered by Channel 7 and Fox TV Channel 25. The movement of IPM/*Partners with Nature* products from the farmstand into retail supermarkets is a first for Massachusetts.

IPM Grower Survey

In January of 1997, the DFA sent out a survey to Massachusetts growers self-defined as IPM practitioners listed in the DFA's Greenbook Database. The purpose of this survey was to provide farmers with an opportunity to offer important feedback on current IPM practices and needs; growers were asked to comment on the type of DFA support they deemed most appropriate in order to advance IPM efforts. Of the 245 surveys mailed out, 63 were returned - a 26% response rate. According to Salant & Dillman (standard text on surveys), in order to reach a 95% confidence level in the information received , based on a sampling error of +/- 10%, a finished sample size of 49 surveys would be required out of a total of 250. This DFA survey fell well within said category. (For more specific information on survey response, contact the Bureau.)

IPM Public Education Efforts

Lack of public knowledge about IPM in general is a challenge to the promotion of IPM products and services. The DFA aims to meets this challenge by supporting and/or actively engaging in a variety of efforts including:

IPM Exhibits: During the 1997 growing season, these exhibits included a *Partners with Nature* display at the Massachusetts Marketplace, Elm Bank Reservation, Dover, in June. This exhibit was organized by the UMass Extension on behalf of this voluntary partnership. A second exhibit involved co-sponsoring an IPM display at the Eastern States Exposition - BIG-E Fair - held in Springfield in September. This exhibit focused on regional efforts at promoting IPM in both agricultural and non-agricultural settings.

IPM Presentations: DFA staff engaged in presentations on IPM at the following forums: the Entomological Society of America, Eastern Branch, in Vermont; the Vegetable Industry Forum in New York organized by Cornell University Extension.

IPM Education Kits: During 1997, the DFA developed IPM educational kits for growers, retailers, and the media. Each Kit is tailored to its target audience; all are part of a concerted effort to educate on IPM, as well as provide information of how to further promote IPM products.

IPM Poster: A new IPM poster has been designed in order to advance public education efforts. This new poster's tag line reads *The IPM Eye Chart;* this heading aims to support the *Farming with Vision* concept that is at the forefront of this year's continued education effort.

Non-Agricultural/Urban IPM

As indicated above, an IPM strategy may also apply to non-agricultural or urban environments. For the purposes of the Department's IPM efforts, the "urban" setting may include indoor structures, such as residential dwellings (e.g., single-family homes, apartments), commercial and public buildings (e.g., restaurants, stores, hospitals, schools), as well as outdoor areas like sports playing fields, town commons and other landscaped grounds, golf courses, and even home gardens. A main objective behind the development and implementation of a non-agricultural or urban IPM program is to advance IPM practice within these environments in an effort to reduce reliance on pesticides and pesticide risks, as well as to enhance consumer education and information on IPM as it relates to these non-agricultural settings.

IPM Public Education Efforts

During FY '97 the Pesticide Bureau engaged in a number of efforts in order to promote IPM practice and services within these non-traditional, non-agricultural settings:

IPM Structural Public Service Announcement (PSAs): As part of the educational resources for the promotion of IPM within non-agricultural settings two, 30-second video PSAs on structural, or indoor, IPM have been developed. It should be noted that this project was completed with grant funding obtained from the EPA, and will be distributed to television stations across the region. The PSA design reflects a cartoon animated style that aims to be both educational and entertaining.

A Homeowner's Guide to Environmentally Sound Lawncare: This 20-page guide informs the consumer about IPM as an approach to lawncare, and details specific IPM practices; seasonal charts and problem-solving tables provide a user-friendly, practical format. Critical input from members of the UMass Extension IPM Program and Bureau staff help to make this first edition a solid resource in support of public education.

The Massachusetts IPM Council

In an effort to build on the existing urban IPM infrastructure, a broad-based "non-agricultural" IPM council was established during FY '96. This body consists of members of industry, academia, public advocacy groups, and government under the auspices of the Department. The overall objectives of the Council are: 1) to better define specific goals and protocols behind non-agricultural IPM programs unique to Massachusetts; 2) to promote the research base and training required of these practical applications; 3) to complement public-oriented educational initiatives on IPM. During 1997, Council workgroups were formed representing specialty areas wherein IPM may be applied, including structural, lawncare, turf/golf course, mosquito control, and an outreach team. Among the workgroup projects completed in the first half of 1997 figure the following: a public informational brochure introducing the Council, and an IPM checklist geared to consumers for distribution by structural pest control operators. The Council represents a consensus-driven approach at complementing and enhancing IPM efforts statewide.

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Endangered Species Program

In an effort to comply with the federal Endangered Species Act of 1973, the US Environmental Protection Agency (EPA) has engaged in voluntary activities to protect listed species from potential risks posed by pesticides; state-lead agencies for pesticide regulation are considered key players in these voluntary efforts. Base funding is provided by the EPA to state agencies in support of their unique, non-regulatory initiatives.

During FY '97, the Pesticide Bureau supported the EPA mandate by spearheading the development of an Endangered Species Coloring Book in collaboration with the Massachusetts Division of Fisheries and Wildlife. The book, entitled *Endangered: Some Massachusetts Animals & Plants at the Crossroads,* illustrates the fifteen (15) Massachusetts federally listed wildlife and plant species, and includes a description of each; GIS maps indicating the species' location on a regional basis are also included. This Coloring Book was completed in late Autumn of 1996. The distribution plan for the 6,000 books began in January of 1997. For the most part, this plan included targeted mailings to the *Massachusetts Agriculture In the Classroom* program, the *Project Wild* Program, and to secondary schools across the state based on an initial letter of introduction and subsequent requests by teachers. As of May 1997, the Pesticide Bureau maintains approximately three-hundred books on hand for general distribution and reference purposes.

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Ground Water Protection Program

Program Update

The Department continued the implementation of the Protection of Ground Water Sources of Public Drinking Water Supplies from Non-Point Pesticide Contamination Regulations; 333 CMR 12.00 (usually just called the Ground Water Regulations) in FY '97. In the sixth active year of the Regulation, the Department received four applications for Pesticide Management Plans (PMPs). An approved PMP is required for the use of any pesticide identified as a Potential Ground Water Contaminant within the Zone II of large Community drinking water wells.

The four applications that were received, and approved, is equal to the lowest number that was received in the previous year. The reduction in receipt of PMP applications by the Ground Water program continues from the first year high of seventeen. The current approved PMP are all either for corn grown under plastic or for pre-treatment of renovated strawberry beds that have no current viable options.

EPA Ground Water Protection Strategy

The central goal of EPA's Pesticides and Ground-Water Strategy is to manage the normal, registered uses of pesticides in order to prevent adverse effects to human health and the environment, and to protect the integrity of the nation's ground-water resources. A principal tenet of this strategy is that as a result of the site specific nature of pesticide use and the potential for ground water contamination, the states need to take the lead role in managing agricultural chemicals.

In order to promote the state role, the EPA has recommended that states develop Generic State Management Plans to manage pesticides for the prevention of ground-water contamination. Generic SMPs should address pesticide use in all geographic areas, including rural and urban areas, golf courses, and rights-of-way. This approach permits the tailoring of pesticide management measures to meet the specific local ground water protection needs.

The Pesticide Bureau, with input from the Department of Environmental Protection and Public Health, is developing a Generic State Management Plan (GSMP) in order to address the requirements of the EPA's Pesticides and Ground Water Strategy and of the Department's ground-water protection strategy.

State Pesticide Management Plans

The Department Ground Water Program has continued development and implementation of GSMP requirements and components. These requirements include the collection of data, such as pesticide use information, that will be used as the basis for the assessment of ground water vulnerability, monitoring, and prevention activities.

The EPA issued the proposed Pesticide Management Plan Rule this past year. The final Rule has yet to be issued, but as proposed, requires states to develop and submit management plans to prevent impacts on ground water from the use of the five previously identified active ingredients within 24 months following final issuance of the rule. The Rule also requires monitoring to assess current or continued contamination, prevention activities, and continued assessment of the efficacy of the management components.

Program Developments

Monitoring

The Department developed a directed sampling program of dairy farmers which maintain private drinking water wells on their property. Dairy farmers were chosen since they typically grow silage corn for feed for their cows. Water samples were analyzed for the five herbicides; atrazine, cyanazine, simazine, alachlor and metolachlor, that are identified in the proposed Rule and requiring future State Management Plans. Samples were also analyzed for those degradation products of those compounds since many are found in groundwater rather than the parent compound, and nitrates. The coordinates of each sampling point were determined by GPS location. In addition, these sampling results will be transferred to a GIS data layer for future assessment needs.

The Department identified 238 dairy wells for sampling in this program. Letters were sent to the farmers notifying them of the program and requesting their assistance in permitting to sample their wells. The Department collected 216 samples from across the and has analyzed most of the samples at this point. Farmers will or have been provided copies of the analysis results for their information.

There have been a substantial number of wells that contained detectable residues of the SMP compounds or their breakdown products. There have been no samples that have exceeded the Maximum Contaminant Levels (MCLs) that are health based standards for allowable levels of pesticides in drinking water. The total number of wells and percentage of positives have not yet been compiled. The results generally indicate that there is a substantial degree of low level contamination of corn herbicide residues in all areas where they are used.

Global Positioning System

The sampling location of each groundwater sampling point was determined with a Global positioning System (GPS) unit. GPS is a satellite based positioning system that can identify the coordinates (longitude, latitude and altitude) of any point of the face of the earth. This is the same type of system that is used by the military with less accuracy. Program staff will use the GPS units to identify the location of all current and previously approved PMP sites and transfer that information to a Geographical Information System (GIS) for inclusion in a data layer.

The GPS information will be transferred to a Geographic Information System (GIS) for plotting the location of PMP sites, groundwater sampling points, and public well locations that have also been mapped by GPS. The GIS is also capable of maintaining non-spatial information about the application site such as; soil type, pesticide applied, application rate, and other data about the PMP. This GIS information has been used to generate maps of the Public Wells, Zone II areas, and physical features to assist applicators in determining if their fields are within a primary zone of contribution of a public well.
Public Drinking Water Well Sampling Program

The Protection of Ground Water Sources of Public Drinking Water Supplies from Non-Point Source Pesticide Contamination Regulations was designed to mitigate potential contamination of public drinking wells by regulating the use of Potential Ground Water Contaminants (PGWC). The Regulations contain provisions that permit the use of PGWC within the primary recharge area of public wells if an applicant obtains an approved PMP from the Department. Consequently, the Department initiated a public drinking water well sampling program in order to assess the efficacy of the Regulations and to assure that public drinking water wells were not being contaminated by pesticides permitted under the PMP process.

The Department initiated the sampling program in 1991 to obtain background information of potential impacts of previous PGWC applications. The sampling program has continued in order to assess the regulations and assure that the PMP process in not resulting in unacceptable ground water contamination. The program sampled public drinking water wells throughout the Commonwealth that have agricultural lands within their zone of contribution.

The Department sampled 83 wells that have had agricultural land use within their primary recharge areas or had been suggested by DEP. Wells chosen for sampling were divided between those with interim and delineated primary recharge areas based on the approximate percentage of each type of primary recharge area as compared to the total number of wells in the . To date, there have been no detections of PGWCs in any public drinking water well, including wells that have had PMPs granted for the use of PGWCs within their primary recharge area. Therefore, the Department has suspended this sampling program to concentrate on the dairy well sampling program.

PGWC List

The Department registered a new active ingredient, acetochlor, in the previous year that was added to the list of Potential Ground Water Contaminants. Acetochlor, that is sold under the trade names of Harness® and Surpass® were registered as State Limited Use (SLU) pesticides that requires applicators hold a pesticide certification license and to obtain a permit from the Department prior to application. The permit is required to ensure that applications are not being made to soils that are prohibited on the label.

The Department issued five permits for the application of acetochlor during FY '97.

Pesticide Use Reports

The Department currently requires that all licensed applicators submit annual use reports for all pesticides. The use report identifies the active ingredients, amounts, and use sites and patterns of pesticides that are being used in the Commonwealth. The information contained in the use reports is being entered into a computerized data management system, to allow for the most effective future use of the information.

This information will enable the Department to generate an accurate listing of actual pesticide usage amounts and patterns within the , and facilitate an assessment of their potential impacts on ground water. Accurate information of pesticide usage within the Commonwealth is a key element in any assessment and subsequent protection activity.